

REMARKS BY GEORGIA TECH PRESIDENT G. WAYNE CLOUGH
The Innovation Summit, October 31, 2005

Good morning. It is a great pleasure to welcome all of you to The Innovation Summit. Georgia Tech is proud to serve as your host and to join with the Southern Technology Council, the Council on Competitiveness, and the Georgia Research Alliance in sponsoring this special event, which will launch the discussion of how the South as a region can become a hot spot of innovation.

I also want to welcome you to Technology Square, and I hope you will have time to take a look around. At Georgia Tech we strive both to drive innovation and to be innovative in our own operations, and one of the places that these two endeavors come together is Technology Square. This vibrant complex replaced vacant lots and abandoned buildings, making an important contribution to the renaissance of the Midtown Atlanta neighborhood into a model live-work-play urban community.

It is also environmentally friendly, with white roofs that reflect the summer heat and many other energy efficiencies. In fact, the building across Spring Street from the hotel, which houses the College of Management and the Barnes & Noble @ Georgia Tech book store, was the third building in the state of Georgia to receive Silver designation as a Leader in Energy and Environmental Design from the U.S. Green Building Council.

Technology Square has won a long list of awards for everything from its design to its pedestrian friendly environment, and last year it received the 2004 Award for Excellence from the Urban Land Institute, which is regarded as the top award in the land use industry.

In addition to being innovative, Technology Square is also driving innovation. This complex places Georgia Tech's business-oriented education and service programs in the heart of Atlanta's emerging technology business sector, incorporating our economic develop endeavors and resources into the city's economic pulse. Even though it has only been open for two years, Technology Square is already emerging as the nexus of a thriving high-tech corridor.

Right next door and connected to the hotel is the Georgia Tech Global Learning and Conference Center. It is the hub of our professional education programs – both the in-person courses that are offered on site, and the electronic programs that reach around the globe. All of the rooms in this center are capable of sending and receiving programming from anywhere in the world.

The College of Management, which is located on the opposite side of the hotel, also serves lifelong learning needs in addition to its body of full-time students. We have two innovative executive master's degrees – one that focuses on the management of technology and the other with a global focus, partnering with universities in France and Argentina.

The faculty and students get hands-on involvement with entrepreneurship, because the Advanced Technology Development Center is located on the north side of Fifth Street. ATDC is the nation's first university-based business incubator and has won a long list of accolades for its success. Just during the past two years, Georgia Tech's research labs have spun off two dozen new companies, and many of them are now in incubation right across the street from us.

Beside ATDC is the Technology Square Research Building, which houses the Georgia Electronic Design Center, where our College of Computing faculty and students are engaged in broadband research and design. The Georgia Electronic Design Center has recently attracted a major Samsung research lab and the North American headquarters and broadband design center for Pirelli.

A number of other business entities are located here, including the state's Economic Development Department and Quick Start workforce training program for new and expanding industries; the Economic Development Unit of the Georgia Power Company; the Georgia Electric Membership Corporation; and the Georgia Economic Developers Association.

Of course, BellSouth is just a block south of Technology Square, and IBM and the Federal Reserve Bank of Atlanta are just a few blocks to the north. So you are in the middle of Atlanta's "hot spot" for innovation – an appropriate setting in which to consider how to make our regional economy more innovative.

Early in the 20th century, Austrian economist Joseph Schumpeter crafted the term "creative destruction" to describe what happens when new technology displaces not only old technology and but also the established companies that made and marketed it. If we look more broadly at the world through the lens of creative destruction, it is not difficult to apply the same idea to countries. The United States – which was the established innovation leader of the world through the 20th century – is now finding itself challenged by ambitious nations who are entering the innovation space with plans to knock off those at the top.

Those of us from research universities are keenly aware that nations like China and India, with populations that are much larger than the United States, are investing heavily in science and engineering education. The number of engineering degrees awarded in these nations has grown rapidly, recently accelerating past the United States, where graduation rates in science and engineering have largely stagnated.

We have been making up the difference by attracting international students, who used to stay here after graduation because the opportunities were better. However, federal regulations implemented in the wake of the 9/11 terrorist attacks have made the United States less hospitable to the graduate students who used to flock to our shores. Procuring a visa became a much lengthier and uncertain process, and restrictions were placed on the research activities of international students.

As a result, the Council of Graduate Schools reported a 33 percent decline from 2003 to 2005 in applications from international students. In one year – between 2003 and 2004 – the number of applicants from international graduate students in engineering declined by 36 percent. Many of us have been engaged in an intensive lobbying effort in Washington, and the restrictions have been eased somewhat. But the welcome mat is still not perceived as being out.

What's more, international students no longer have to come to the United States to get a quality education and pursue a meaningful career. They can increasingly do it at home, as universities expand and research labs crop up from Bangalore to Beijing to Moscow.

When we look at America's investment in fundamental research, much of which takes place at universities, the picture is similar. Although the United States has dominated the world in its research investments since World War II and is still the proverbial 700-pound gorilla, the level of our investment has slipped from 2 percent of the Gross Domestic Product to about 1 percent over the past 40 years. If you look at research investments in the hot new interdisciplinary field of nanotechnology, you will discover that Europe and Asia are pacing us almost dollar for dollar.

Scientific papers published by American authors have been flat for more than a decade, while those from abroad have increased. We have also seen an increase in the number of U.S. patents issued for inventions that were created abroad.

Universities are used to defining their peer set from among their fellow American institutions. But as we enter the 21st century, we are finding ourselves competing in a global arena in our effort to educate the talent and conduct the research that will drive

the innovation process. And I expect you those of you from the corporate sector would say much the same thing about where your competition is coming from.

In fact, the question that is appearing with increasing frequency and intensity in newspapers and magazines... the question that is increasingly raised in boardrooms and barrooms across the nation is: Can the United States compete?

We have a rich heritage of entrepreneurship that propelled us to the forefront as the most prosperous and powerful nation in the world. But it is growing clear that we are in trouble if we simply rest on our laurels and put our economy on cruise control. As Will Rogers once quipped, "Even if you're on the right track, you'll get run over if you just sit there."

It would be unrealistic for us to think that we will continue to dominate the high-tech end of the world economy as we have in the past. Our wages and health care costs are higher than those of our global competitors. The largest technology markets and technological workforces will soon be in Asia. And we can expect to produce only one of every four or five major inventions. How can we compete in this environment?

The answer is by being much more deliberate and strategic about aligning our resources and collaborating with each other to stoke the fires of innovation. It was my privilege to co-chair the first phase of the National Innovation Initiative together with IBM CEO Sam Palmisano. We conducted a discussion involving more than 400 leaders from industry, academia, labor, and government about how to do that for the nation as a whole. The 30 recommendations that resulted are in a report entitled "InnovateAmerica" which is in your conference materials.

But in a very real sense, innovation is a local activity. The things that need to happen at the national level – and you will hear about them from Bill Brody a little later this morning – are very important and must be done. But what they will do is help to create an environment that is conducive to innovation.

Innovation itself will actually occur at the local and regional level – at places where the workforce is educated and the research is conducted... at places where research discoveries and new technologies are translated into marketable products and services. Innovation itself will actually occur in places that provide opportunities for conversation and collaboration between disciplines, and between and among universities, businesses, and governments... in communities and regions that are strategic about aligning their resources for maximum effect.

That is the point of this Innovation Summit today – to begin the innovation dialog across the South and begin to shape the strategies that will allow our region to be competitive in the global economy of the 21st century. The South is the first region in the nation to gather its leaders and begin the discussion of how we can seize a piece of the action in a global economy based on innovation. And we hope that this meeting here today serves as a clarion call to action.

I am pleased to be joined in welcoming you by Duane Ackerman, who is chairman of the Council on Competitiveness and chairman and CEO of one of the South's technology giants, the BellSouth Corporation. I have had the honor and privilege of working closely with Duane, in our work with the Council on Competitiveness and here at home in Atlanta where we are neighbors.

Duane is concluding his term as chair of the Council on Competitiveness, and his time there was marked by many notable accomplishments. The metro-Atlanta and Columbus area especially benefited from being one of the clusters in the Clusters of Innovation study that he chaired with Michael Porter of Harvard. He also made a significant contribution to the Council's work on competitiveness and security.

(Ackerman speaks, introduces Gov Perdue. Perdue speaks.)

Thank you, Governor Perdue, for providing an important overview of the South and highlighting examples and resources that will help to shape the discussions of the day. We look forward to your ongoing leadership as chairman of the Southern Technology Council.

The National Innovation Initiative was instigated by the Council on Competitiveness, which is holding its annual meeting in conjunction with this summit. The purpose of the NII was to identify how the nature of innovation has changed and then to lay out an action agenda to respond to the challenges of global competition.

The NII report, entitled *InnovateAmerica*, was the first to describe and embrace the ecosystem approach to innovation, and it continues to be the benchmark by which subsequent reports are measured. We have seen a number of other reports emerge over the course of the past year from organizations ranging from the National Academies of sciences, engineering and medicine to the U.S. Chamber of Commerce. And they all reinforce and complement the NII findings. So we are hearing a growing drumbeat calling for a coordinated approach to enhancing innovation.

The folks at our nation's Capitol are beginning to listen and realize the importance of this effort to promote innovation. Senators John Ensign and Joe Lieberman are drafting comprehensive innovation legislation to begin providing the necessary federal framework. A second bill is being drafted by Senators Lamar Alexander and Jeff Bingaman, and there is interest in the House of Representatives as well.

Measures like these to implement the NII recommendations are the focus of the NII Leadership Council, which is a three-year effort. The Leadership Council is made of CEOs, university presidents, labor leaders, and others. It is co-chaired by Craig Barrett, who is chairman of the board of Intel, and Dr. Bill Brody, who is president of Johns Hopkins University.

Bill Brody is here with us today, and he is going to tell us more about the near-term priorities that the Leadership Council is working to implement. He will be followed by Deborah Wince-Smith, president of the Council on Competitiveness, who will focus on the longer-term priorities and over-the-horizon issues that must be addressed if we are to realize our innovation potential.